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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 837,332	04 19 2001	Bart Gerard Boucherie	740612-167	8559

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EXAMINER

DEL SOLE, JOSEPH S

ART UNIT PAPER NUMBER

1722

DATE MAILED: 06 09 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/837,332	<b>Applicant(s)</b> BOUCHERIE, BART GERARD
	<b>Examiner</b> Joseph S. Del Sole	<b>Art Unit</b> 1722

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s): _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Boucherie (6,051,176).

Boucherie (6,051,176) teaches a tool for injection molding of toothbrush bodies of at least two different plastics components injection-molded in succession (col 1, lines 31-44 and col 2, lines 36-54), the tool comprising tool mold parts which can be moved relative to each other (Fig 4, #4 and #8 are the first part and Fig 4, #16 and #17 are the second mold part) and together comprise two groups of parallel mold cavities, and further comprise a rotatable carrier arm (Fig 6, #31) mounted for rotation about an axis, with one of the mold parts (Fig 4, #4 and #8) comprising a recess for each group of mold cavities, a mold insert (Fig 6, #16 and #17) being insertable into the recess; partial cavities being formed in the mold inserts, which partial cavities each correspond to a head portion of the toothbrush bodies (Fig 3); a first one of the groups (Fig 13, the upper left and lower left quadrants) being defined by all cavities into which a first one of the plastics components is injected, and a second one of the groups (Fig 13, the upper right and lower right quadrants) of mold cavities being defined by all mold cavities into which a second one of the plastics components is injected (Fig 1, #11 and #13); the mold

cavities of the first and second groups are arranged on opposite sides of the rotatable carrier arm (Fig 13) and the mold inserts are attached to the carrier arm (Fig 1); the mold cavities are arranged in each group parallel to each other and so as to have an identical orientation (Fig 13); the mold cavities of the first group are arranged so as to lie opposite the mold cavities of the second group (Fig 13); the mold cavities of the first group are arranged with respect to the axis of the carrier arm so as to be exclusively point-symmetric to the mold cavities of the second group (Fig 13); each group is constituted by a pair of subgroups (Fig 13); in each pair of subgroups, the mold cavities of one subgroup are arranged so as to be aligned with the mold cavities of another subgroup (Fig 13).

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Boucherie (EP 0 836 923 A1).

Boucherie (EP 0 836 923 A1) teaches a tool for injection molding of toothbrush bodies of at least two different plastics components injection-molded in succession (col 1, lines 31-44 and col 2, lines 36-54), the tool comprising tool mold parts which can be moved relative to each other (Fig 4, #4 and #8 are the first part and Fig 4, #16 and #17 are the second mold part) and together comprise two groups of parallel mold cavities, and further comprise a rotatable carrier arm (Fig 6, #31) mounted for rotation about an axis, with one of the mold parts (Fig 4, #4 and #8) comprising a recess for each group of mold cavities, a mold insert (Fig 6, #16 and #17) being insertable into the recess; partial cavities being formed in the mold inserts, which partial cavities each correspond to a head portion of the toothbrush bodies (Fig 3); a first one of the groups (Fig 13, the upper

left and lower left quadrants) being defined by all cavities into which a first one of the plastics components is injected, and a second one of the groups (Fig 13, the upper right and lower right quadrants) of mold cavities being defined by all mold cavities into which a second one of the plastics components is injected (Fig 1, #11 and #13); the mold cavities of the first and second groups are arranged on opposite sides of the rotatable carrier arm (Fig 13) and the mold inserts are attached to the carrier arm (Fig 1); the mold cavities are arranged in each group parallel to each other and so as to have an identical orientation (Fig 13); the mold cavities of the first group are arranged so as to lie opposite the mold cavities of the second group (Fig 13); the mold cavities of the first group are arranged with respect to the axis of the carrier arm so as to be exclusively point-symmetric to the mold cavities of the second group (Fig 13); each group is constituted by a pair of subgroups (Fig 13); in each pair of subgroups, the mold cavities of one subgroup are arranged so as to be aligned with the mold cavities of another subgroup (Fig 13).

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Boucherie (5,609,890).

Boucherie (5,609,890) teaches a tool for injection molding of toothbrush bodies of at least two different plastics components injection-molded in succession (col 1, lines 62-67 and col 2, lines 1-63), the tool comprising tool mold parts which can be moved relative to each other (Fig 6, #20 and #22 are the first part and Fig 6, #28c is the second mold part) and together comprise two groups of parallel mold cavities, and further comprise a rotatable carrier arm (Fig 6, #16c) mounted for rotation about an axis, with

one of the mold parts (Fig 6, #20 and #22) comprising a recess for each group of mold cavities, a mold insert (Fig 6, #28c) being insertable into the recess; partial cavities being formed in the mold inserts, which partial cavities each correspond to a head portion of the toothbrush bodies (Fig 6); a first one of the groups (Fig 6, the top left quadrant) of mold cavities being defined by all mold cavities into which a first one of the plastics components is injected, a second one of the groups (Fig 6, top right quadrant) being defined by all mold cavities into which a second one of the plastics components is injected (Fig 6); the mold cavities of the first and second groups are arranged on opposite sides of the rotatable carrier arm (Fig 6) and the mold inserts are attached to the carrier arm (Fig 6); the mold cavities are arranged in each group parallel to each other and so as to have an identical orientation (Fig 6); the mold cavities of the first group are arranged so as to lie opposite the mold cavities of the second group (Fig 6); the mold cavities of the first group are arranged with respect to the axis of the carrier arm so as to be exclusively point-symmetric to the mold cavities of the second group (Fig 6); each group is constituted by a pair of subgroups (Fig 6, in the upper right quadrant there is a sub group of three cavities and a sub group of two cavities, in the upper left quadrant there is a sub group of three cavities and a sub group of two cavities); in each pair of subgroups, the mold cavities of one subgroup are arranged so as to be aligned with the mold cavities of another subgroup (Fig 6, the top and bottom of each cavity is aligned horizontally).

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Boucherie (EP 0 678 368 A1).

Boucherie (EP 0 678 368 A1) teaches a tool for injection molding of toothbrush bodies of at least two different plastics components injection-molded in succession (col 1, lines 62-67 and col 2, lines 1-63), the tool comprising tool mold parts which can be moved relative to each other (Fig 6, #20 and #22 are the first part and Fig 6, #28c is the second mold part) and together comprise two groups of parallel mold cavities, and further comprise a rotatable carrier arm (Fig 6, #16c) mounted for rotation about an axis, with one of the mold parts (Fig 6, #20 and #22) comprising a recess for each group of mold cavities, a mold insert (Fig 6, #28c) being insertable into the recess; partial cavities being formed in the mold inserts, which partial cavities each correspond to a head portion of the toothbrush bodies (Fig 6); a first one of the groups (Fig 6, the top left quadrant) of mold cavities being defined by all mold cavities into which a first one of the plastics components is injected, a second one of the groups (Fig 6, top right quadrant) being defined by all mold cavities into which a second one of the plastics components is injected (Fig 6); the mold cavities of the first and second groups are arranged on opposite sides of the rotatable carrier arm (Fig 6) and the mold inserts are attached to the carrier arm (Fig 6); the mold cavities are arranged in each group parallel to each other and so as to have an identical orientation (Fig 6); the mold cavities of the first group are arranged so as to lie opposite the mold cavities of the second group (Fig 6); the mold cavities of the first group are arranged with respect to the axis of the carrier arm so as to be exclusively point-symmetric to the mold cavities of the second group (Fig 6); each group is constituted by a pair of subgroups (Fig 6, in the upper right quadrant there is a sub group of three cavities and a sub group of two cavities, in the



upper left quadrant there is a sub group of three cavities and a sub group of two cavities); in each pair of subgroups, the mold cavities of one subgroup are arranged so as to be aligned with the mold cavities of another subgroup (Fig 6, the top and bottom of each cavity is aligned horizontally).

### ***Response to Arguments***

6. Applicant's arguments filed 5/23/03 have been fully considered but they are not persuasive.

The Applicant argues that the '176 and '923 references fail to teach an injection molding tool wherein the mold cavities of the first group are arranged with respect to the axis of the carrier arm so as to be exclusively point-symmetric to the mold cavities of the second group. The Applicant further argues that the mold cavities of the upper and lower left quadrants define a first group of mold cavities into which a first plastics component is injected and the mold cavities of the upper and lower right quadrant define a second group of mold cavities into which a second plastics component is injected. The Applicant argues that since the second group of cavities are mirror symmetric to the first group, the second group of cavities are not "exclusively point-symmetric" according to the definition at page 4 of the specification.

The Examiner disagrees. About the axis of the carrier arm, each cavity of the first group is exclusively point symmetric to its corresponding cavity of the second group and therefore the invention as defined by the claims is taught by the prior art. If one were to follow the Applicant's arguments that the first group is not exclusively point symmetric with the second group because non corresponding cavities are mirror

symmetric, then the Applicant's inventions as described in Figures 1 and 3 would also not be exclusively mirror symmetric because non corresponding cavities in each of those Figures, through a combination of point symmetry and mirror symmetry, are symmetric. The Applicant's definition of exclusive point symmetry is further muddled by the fact that point symmetry around one define point can also be defined by a combination of mirror symmetry and point symmetry through a different point. Therefore exclusive point symmetry does not exist as defined by the Applicant.

The Applicant argues that the '890 and '368 references fail to teach an injection molding tool wherein the mold cavities of the first group are arranged with respect to the axis of the carrier arm so as to be exclusively point-symmetric to the mold cavities of the second group. The Applicant further argues that the mold cavities of the upper and lower left quadrants define a first group of mold cavities into which a first plastic is injected and the mold cavities of the upper and lower right quadrants define a second group of mold cavities into which a second plastic is injected.

The Examiner disagrees. As discussed above, the first group of cavities is merely the upper left quadrant, and not the upper and lower left quadrants. Likewise, the second group of cavities is merely the upper right quadrant. A comparison of the upper left and right quadrants to the Applicant's Figure 3 shows that the arrangement of cavities directly corresponds; and therefore both show "exclusive point symmetry". Furthermore, to address the amendment to claim 1, the limitation of "exactly two groups" does not overcome the '890 and '368 references. The use of the term comprising opens the claim, and the '890 and '368 references comprise two sets of two

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mold parts which can be moved relative to each other and each set of two mold parts constitute exactly two groups.

**Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non-after finals and (703) 872-9311 for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Joseph S Del Sole*

J.S.D.  
June 2, 2003



ROBERT DAVIS  
PRIMARY EXAMINER  
GROUP 1300-1, 2, 2c

*6/6/03*